

SEQUENCE LISTING

RECEIVED

TECH CENTER 1600/2900

<110> Kisiday, John Grodzinsky, Alan Zhang, Shuguang

<120> Peptide Scaffold Encapsulation of Tissue
 Cells and Uses Thereof

<130> 01997/537001

<140> US 09/778,200

<141> 2001-02-06

<160> 43

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Designed Peptide

<400> 1

Arg Ala Asp Ala Arg Ala Asp Ala Asp Ala Asp Ala Asp Ala 1 5 10 15

<210> 2

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Designed Peptide

<400> 2

Arg Ala Asp Ala Arg Gly Asp Ala Arg Ala Asp Ala Arg Gly Asp Ala

1 10 15

<210> 3

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Designed Peptide

<400> 3

Arg Ala Asp Ala Arg Ala Asp Ala 1 5

```
<210> 4
 <211> 16
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 Arg Ala Arg Ala Asp Ala Asp Ala Arg Ala Asp Ala Asp Ala
                                      10
 <210> 5
 <211> 8
 <212> PRT
 <213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 5
Arg Ala Arg Ala Asp Ala Asp Ala
<210> 6
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 6
Ala Glu Ala Lys Ala Glu Ala Lys Ala Glu Ala Lys Ala Glu Ala Lys
<210> 7
<211> 8
<212> PRT
<213> Artificial Sequence
<223> Designed Peptide
<400> 7
Ala Glu Ala Lys Ala Glu Ala Lys
<210> 8
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
```

```
<400> 8
 Arg Ala Glu Ala Arg Ala Glu Ala Arg Ala Glu Ala Arg Ala Glu Ala
                                      10
 <210> 9
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 9
 Arg Ala Glu Ala Arg Ala Glu Ala
 <210> 10
 <211> 16
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
<400> 10
Lys Ala Asp Ala Lys Ala Asp Ala Lys Ala Asp Ala Lys Ala Asp Ala
<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 11
Lys Ala Asp Ala Lys Ala Asp Ala
<210> 12
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 12
Ala Glu Ala Glu Ala His Ala Glu Ala Glu Ala His Ala His
1
<210> 13
<211> 8
```

```
<212> PRT
 <213> Artificial Sequence
 <220>
<223> Designed Peptide
 <400> 13
 Ala Glu Ala Glu Ala His Ala His
                 5
<210> 14
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 14
Phe Glu Phe Glu Phe Lys Phe Lys Phe Glu Phe Glu Phe Lys Phe Lys
                 5
<210> 15
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 15
Phe Glu Phe Lys Phe Glu Phe Lys
 1
<210> 16
<211> 16
<212> PRT
<213> Artificial Sequence
<223> Designed Peptide
<400> 16
Leu Glu Leu Lys Leu Lys Leu Glu Leu Lys Leu Lys
                 5
<210> 17
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 17
```

```
Leu Glu Leu Lys Leu Lys
 <210> 18
 <211> 16
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 18
 Ala Glu Ala Glu Ala Lys Ala Lys Ala Glu Ala Lys Ala Lys
 <210> 19
 <211> 12
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 19
Ala Glu Ala Glu Ala Glu Ala Lys Ala Lys
<210> 20
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 20
Ala Glu Ala Glu Ala Lys Ala Lys
                 5
<210> 21
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 21
Lys Ala Lys Ala Lys Ala Glu Ala Glu Ala Glu Ala Glu Ala
<210> 22
<211> 16
<212> PRT
```

```
<213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 22
Ala Glu Ala Glu Ala Glu Ala Lys Ala Lys Ala Lys Ala Lys
                                   10
<210> 23
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 23
Arg Ala Arg Ala Arg Ala Asp Ala Asp Ala Asp Ala Asp Ala
<210> 24
<211> 16
<212> PRT
<213> Artificial Sequence
<223> Designed Peptide
<400> 24
Ala Asp Ala Asp Ala Asp Ala Arg Ala Arg Ala Arg Ala Arg
<210> 25
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 25
Asp Ala Asp Ala Asp Ala Asp Ala Arg Ala Arg Ala Arg Ala
<210> 26
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 26
Ala Asp Ala Asp Ala Asp Ala Asp Ala Arg Ala Arg Ala Arg
```

```
<210> 27
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 27
His Glu His Glu His Lys His Clu His Glu His Lys His Lys
                                    10
<210> 28
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 28
His Glu His Clu His Lys His Lys
<210> 29
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 29
Val Glu Val Glu Val Glu Val Glu Val Glu Val Glu Val Glu
Val Glu Val Glu
<210> 30
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 30
Arg Phe Arg Phe Arg Phe Arg Phe Arg Phe Arg Phe Arg Phe
1
                                   10
Arg Phe Arg Phe
           20
```

```
<210> 31
 <211> 16
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 31
 Arg Gly Asp Tyr Arg Tyr Asp Tyr Arg Tyr Asp Tyr Arg Gly Asp Tyr
                                      10
 <210> 32
 <211> 16
 <212> PRT
<213> Artificial Sequence
<220>
 <223> Designed Peptide
<400> 32
Arg Gly Asp Phe Arg Phe Asp Phe Arg Phe Asp Phe Arg Gly Asp Phe
<210> 33
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 33
Arg Gly Asp Trp Arg Trp Asp Trp Arg Trp Asp Trp Arg Gly Asp Trp
<210> 34
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 34
Arg Ala Asp Tyr Arg Tyr Glu Tyr Arg Tyr Glu Tyr Arg Ala Asp Tyr
<210> 35
<211> 16
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
```

```
<400> 35
 Arg Ala Asp Phe Arg Phe Asp Phe Arg Phe Asp Phe Arg Ala Asp Phe
 <210> 36
 <211> 16
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 36
 Arg Ala Asp Trp Arg Trp Asp Trp Arg Trp Asp Trp Arg Ala Asp Trp
                                     10
 <210> 37
 <211> 26
 <212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 37
Arg Gly Asp Tyr Arg Tyr Asp Tyr Thr Phe Arg Glu Glu Glu Gly Leu
Gly Ser Arg Tyr Asp Tyr Arg Gly Asp Tyr
<210> 38
<211> 26
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 38
Arg Gly Asp Tyr Arg Tyr Asp Tyr Thr Phe Lys Glu Glu Glu Gly Leu
                 5
Gly Ser Arg Tyr Asp Tyr Arg Gly Asp Tyr
            20
<210> 39
<211> 26
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 39
Arg Gly Asp Tyr Arg Tyr Asp Tyr Thr Ala Ser Glu Leu Glu Gly Arg
```

```
Gly Thr Arg Tyr Asp Tyr Arg Gly Asp Tyr
             20
 <210> 40
 <211> 27
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
 <400> 40
 Arg Gly Asp Tyr Arg Tyr Asp Tyr Ala Pro Thr Ala Gln Glu Ala Gly
 Glu Gly Pro Arg Tyr Asp Tyr Arg Gly Asp Tyr
             20
 <210> 41
 <211> 27
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Designed Peptide
<400> 41
Arg Gly Asp Tyr Arg Tyr Asp Tyr Pro Thr Ile Ser Gln Glu Leu Gly
                                     10
Gln Arg Pro Arg Tyr Asp Tyr Arg Gly Asp Tyr
<210> 42
<211> 27
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 42
Arg Gly Asp Tyr Arg Tyr Asp Tyr Pro Thr Val Ser Gln Glu Leu Gly
Gln Arg Pro Arg Tyr Asp Tyr Arg Gly Asp Tyr
<210> 43
<211> 12
<212> PRT
<213> Artificial Sequence
<220>
<223> Designed Peptide
<400> 43
Lys Leu Asp Leu Lys Leu Asp Leu Asp Leu
```

674 AS 1 5 10

DATE: 11/06/2001

TIME: 10:57:03

OIPE

```
Input Set : A:\01997.537001.SEQLIST.TXT
                     Output Set: N:\CRF3\11062001\I778200.raw
      4 <110> APPLICANT: Kisiday, John
              Grodzinsky, Alan
      6
              Zhang, Shuguang
      8 <120> TITLE OF INVENTION: Peptide Scaffold Encapsulation of Tissue
              Cells and Uses Thereof
     12 <130> FILE REFERENCE: 01997/537001
     14 <140> CURRENT APPLICATION NUMBER: US 09/708,200
C--> 15 <141> CURRENT FILING DATE: 2000-02-06
     17 <160> NUMBER OF SEQ ID NOS: 43
     19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
                                                                 ENTERED
     21 <210> SEQ ID NO: 1
    22 <211> LENGTH: 16
    23 <212> TYPE: PRT
    24 <213> ORGANISM: Artificial Sequence
    26 <220> FEATURE:
    27 <223> OTHER INFORMATION: Designed Peptide
    29 <400> SEQUENCE: 1
    30 Arg Ala Asp Ala Arg Ala Asp Ala Asp Ala Asp Ala Asp Ala
    31 1
    34 <210> SEQ ID NO:
    35 <211> LENGTH: 16
    36 <212> TYPE: PRT
    37 <213> ORGANISM: Artificial Sequence
    39 <220> FEATURE:
    40 <223> OTHER INFORMATION: Designed Peptide
    42 <400> SEQUENCE: 2
    43 Arg Ala Asp Ala Arg Gly Asp Ala Arg Ala Asp Ala Arg Gly Asp Ala
    47 <210> SEQ ID NO: 3
    48 <211> LENGTH: 8
    49 <212> TYPE: PRT
    50 <213> ORGANISM: Artificial Sequence
    52 <220> FEATURE:
    53 <223> OTHER INFORMATION: Designed Peptide
    55 <400> SEQUENCE: 3
    56 Arg Ala Asp Ala Arg Ala Asp Ala
    57 1
    60 <210> SEQ ID NO:
    61 <211> LENGTH: 16
    62 <212> TYPE: PRT
    63 <213> ORGANISM: Artificial Sequence
    65 <220> FEATURE:
    66 <223> OTHER INFORMATION: Designed Peptide
    68 <400> SEQUENCE: 4
    69 Arg Ala Arg Ala Asp Ala Asp Ala Arg Ala Asp Ala Asp Ala
    70 1
                                           10
    73 <210> SEQ ID NO: 5
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/778,200

RAW SEQUENCE LISTING

DATE: 11/06/2001

PATENT APPLICATION: US/09/778,200

TIME: 10:57:03

Input Set : A:\01997.537001.SEQLIST.TXT Output Set: N:\CRF3\11062001\1778200.raw

74 <211> LENGTH: 8 75 <212> TYPE: PRT 76 <213> ORGANISM: Artificial Sequence 78 <220> FEATURE: 79 <223> OTHER INFORMATION: Designed Peptide 81 <400> SEQUENCE: 5 82 Arg Ala Arg Ala Asp Ala Asp Ala 86 <210> SEQ ID NO: 6 87 <211> LENGTH: 16 88 <212> TYPE: PRT 89 <213> ORGANISM: Artificial Sequence 91 <220> FEATURE: 92 <223> OTHER INFORMATION: Designed Peptide < 94 <400> SEQUENCE: 6 95 Ala Glu Ala Lys Ala Glu Ala Lys Ala Glu Ala Lys Ala Glu Ala Lys 96 1 5 10 99 <210> SEQ ID NO: 7 100 <211> LENGTH: 8 101 <212> TYPE: PRT 102 <213> ORGANISM: Artificial Sequence 104 <220> FEATURE: 105 <223> OTHER INFORMATION: Designed Peptide 107 <400> SEQUENCE: 7 108 Ala Glu Ala Lys Ala Glu Ala Lys 109 1 112 <210> SEQ ID NO: 8 113 <211> LENGTH: 16 114 <212> TYPE: PRT 115 <213> ORGANISM: Artificial Sequence 117 <220> FEATURE: 118 <223> OTHER INFORMATION: Designed Peptide 120 <400> SEQUENCE: 8 121 Arg Ala Glu Ala Arg Ala Glu Ala Arg Ala Glu Ala Glu Ala 122 1 125 <210> SEQ ID NO: 9 126 <211> LENGTH: 8 127 <212> TYPE: PRT 128 <213> ORGANISM: Artificial Sequence 130 <220> FEATURE: 131 <223> OTHER INFORMATION: Designed Peptide 133 <400> SEQUENCE: 9 134 Arg Ala Glu Ala Arg Ala Glu Ala 135 1 138 <210> SEQ ID NO: 10 139 <211> LENGTH: 16 140 <212> TYPE: PRT 141 <213> ORGANISM: Artificial Sequence

143 <220> FEATURE:

RAW SEQUENCE LISTING DATE: 11/06/2001 PATENT APPLICATION: US/09/778,200 TIME: 10:57:03

Input Set : A:\01997.537001.SEQLIST.TXT
Output Set: N:\CRF3\11062001\1778200.raw

144 <223> OTHER INFORMATION: Designed Peptide 146 <400> SEQUENCE: 10 147 Lys Ala Asp Ala Lys Ala Asp Ala Lys Ala Asp Ala Lys Ala Asp Ala 148 1 151 <210> SEQ ID NO: 11 152 <211> LENGTH: 8 153 <212> TYPE: PRT 154 <213> ORGANISM: Artificial Sequence 156 <220> FEATURE: 157 <223> OTHER INFORMATION: Designed Peptide 159 <400> SEQUENCE: 11 160 Lys Ala Asp Ala Lys Ala Asp Ala 164 <210> SEQ ID NO: 12 165 <211> LENGTH: 16 166 <212> TYPE: PRT 167 <213> ORGANISM: Artificial Sequence 169 <220> FEATURE: 170 <223> OTHER INFORMATION: Designed Peptide 172 <400> SEQUENCE: 12 173 Ala Glu Ala Glu Ala His Ala His Ala Glu Ala Glu Ala His Ala His 10 177 <210> SEQ ID NO: 13 178 <211> LENGTH: 8 179 <212> TYPE: PRT 180 <213> ORGANISM: Artificial Sequence 182 <220> FEATURE: 183 <223> OTHER INFORMATION: Designed Peptide 185 <400> SEQUENCE: 13 186 Ala Glu Ala Glu Ala His Ala His 187 1 190 <210> SEQ ID NO: 14 191 <211> LENGTH: 16 192 <212> TYPE: PRT 193 <213> ORGANISM: Artificial Sequence 195 <220> FEATURE: 196 <223> OTHER INFORMATION: Designed Peptide 198 <400> SEQUENCE: 14 199 Phe Glu Phe Glu Phe Lys Phe Lys Phe Glu Phe Glu Phe Lys 200 1 5 10 203 <210> SEQ ID NO: 15 204 <211> LENGTH: 8 205 <212> TYPE: PRT 206 <213> ORGANISM: Artificial Sequence 208 <220> FEATURE: 209 <223> OTHER INFORMATION: Designed Peptide 211 <400> SEQUENCE: 15 212 Phe Glu Phe Lys Phe Glu Phe Lys 213 1

RAW SEQUENCE LISTINGPATENT APPLICATION: **US/09/778,200**DATE: 11/06/2001
TIME: 10:57:03

Input Set : A:\01997.537001.SEQLIST.TXT
Output Set: N:\CRF3\11062001\1778200.raw

216 <210> SEQ ID NO: 16 217 <211> LENGTH: 16 218 <212> TYPE: PRT 219 <213> ORGANISM: Artificial Sequence 221 <220> FEATURE: 222 <223> OTHER INFORMATION: Designed Peptide 224 <400> SEQUENCE: 16 225 Leu Glu Leu Glu Leu Lys Leu Lys Leu Glu Leu Glu Leu Lys Leu Lys 226 1 229 <210> SEQ ID NO: 17 230 <211> LENGTH: 8 231 <212> TYPE: PRT 232 <213> ORGANISM: Artificial Sequence 234 <220> FEATURE: 235 <223> OTHER INFORMATION: Designed Peptide 237 <400> SEQUENCE: 17 238 Leu Glu Leu Glu Leu Lys Leu Lys 239 1 242 <210> SEQ ID NO: 18 243 <211> LENGTH: 16 244 <212> TYPE: PRT 245 <213> ORGANISM: Artificial Sequence 247 <220> FEATURE: 248 <223> OTHER INFORMATION: Designed Peptide 250 <400> SEQUENCE: 18 251 Ala Glu Ala Glu Ala Lys Ala Lys Ala Glu Ala Glu Ala Lys Ala Lys 252 1 5 255 <210> SEQ ID NO: 19 256 <211> LENGTH: 12 257 <212> TYPE: PRT 258 <213> ORGANISM: Artificial Sequence 260 <220> FEATURE: 261 <223> OTHER INFORMATION: Designed Peptide 263 <400> SEQUENCE: 19 264 Ala Glu Ala Glu Ala Glu Ala Lys Ala Lys 265 1 268 <210> SEO ID NO: 20 269 <211> LENGTH: 8 270 <212> TYPE: PRT 271 <213> ORGANISM: Artificial Sequence 273 <220> FEATURE: 274 <223> OTHER INFORMATION: Designed Peptide 276 <400> SEQUENCE: 20 277 Ala Glu Ala Glu Ala Lys Ala Lys 278 1 281 <210> SEQ ID NO: 21 282 <211> LENGTH: 16 283 <212> TYPE: PRT 284 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTINGPATENT APPLICATION: **US/09/778,200**DATE: 11/06/2001

TIME: 10:57:03

Input Set : A:\01997.537001.SEQLIST.TXT
Output Set: N:\CRF3\11062001\1778200.raw

286 <220> FEATURE: 287 <223> OTHER INFORMATION: Designed Peptide 289 <400> SEQUENCE: 21 290 Lys Ala Lys Ala Lys Ala Clu Ala Glu Ala Glu Ala Glu Ala Glu Ala 294 <210> SEQ ID NO: 22 295 <211> LENGTH: 16 296 <212> TYPE: PRT 297 <213> ORGANISM: Artificial Sequence 299 <220> FEATURE: 300 <223> OTHER INFORMATION: Designed Peptide 302 <400> SEQUENCE: 22 303 Ala Glu Ala Glu Ala Glu Ala Glu Ala Lys Ala Lys Ala Lys Ala Lys 307 <210> SEQ ID NO: 23 308 <211> LENGTH: 16 309 <212> TYPE: PRT 310 <213> ORGANISM: Artificial Sequence 312 <220> FEATURE: 313 <223> OTHER INFORMATION: Designed Peptide 315 <400> SEQUENCE: 23 316 Arg Ala Arg Ala Arg Ala Arg Ala Asp Ala Asp Ala Asp Ala Asp Ala 317 1 320 <210> SEQ ID NO: 24 321 <211> LENGTH: 16 322 <212> TYPE: PRT 323 <213> ORGANISM: Artificial Sequence 325 <220> FEATURE: 326 <223> OTHER INFORMATION: Designed Peptide 328 <400> SEQUENCE: 24 329 Ala Asp Ala Asp Ala Asp Ala Asp Ala Arg Ala Arg Ala Arg Ala Arg 330 1 10 5 333 <210> SEQ ID NO: 25 334 <211> LENGTH: 16 335 <212> TYPE: PRT 336 <213> ORGANISM: Artificial Sequence 338 <220> FEATURE: 339 <223> OTHER INFORMATION: Designed Peptide 341 <400> SEQUENCE: 25 342 Asp Ala Asp Ala Asp Ala Asp Ala Arg Ala Arg Ala Arg Ala Arg Ala 343 1 10 346 <210> SEQ ID NO: 26 347 <211> LENGTH: 16 348 <212> TYPE: PRT 349 <213> ORGANISM: Artificial Sequence 351 <220> FEATURE: 352 <223> OTHER INFORMATION: Designed Peptide 354 <400> SEQUENCE: 26 355 Ala Asp Ala Asp Ala Asp Ala Asp Ala Arg Ala Arg Ala Arg Ala Arg

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/778,200

DATE: 11/06/2001

TIME: 10:57:04

Input Set : A:\01997.537001.SEQLIST.TXT
Output Set: N:\CRF3\11062001\1778200.raw

 $L\!:\!15~M\!:\!271~C\!:$ Current Filing Date differs, Replaced Current Filing Date